

Amendments to the Specification

In the Specification:

Before paragraph [0001], please delete the headings "Description" and "Field of the Invention."

Before paragraph [0002], please replace the heading with the following rewritten heading:

BACKGROUND INFORMATION

Please replace paragraph [0006] with the following rewritten paragraph:

[0006] It is therefore ~~the~~ an object of the present invention to provide a low-power control circuit that has a low degree of complexity and is largely independent of voltage.

Please replace paragraph [0007] with the following rewritten paragraph:

[0007] ~~Starting from a control circuit of the type mentioned at the outset, this objective is achieved in accordance with the present invention by the control circuit of the present invention.~~
A. The present invention provides a control circuit for an electromagnetic operating mechanism, wherein a pickup voltage and a holding voltage, which is significantly lower than the pickup voltage, are provided by relatively simple means in the form of a timer-controlled voltage source and a step-down d.c. voltage converter. The magnitude of the pickup voltage is below the permissible operating voltage range and is largely independent of the magnitude of the control voltage. The holding voltage is controlled to a level which, in terms of absolute value, is far below the pickup voltage. The voltage applied to the control input, which can be selected to be a DC voltage or an AC voltage, at the same time powers the control circuit. After the control voltage has been applied, the operating voltage is built up immediately via the rectifier circuit. The developing operating voltage, first of all, activates a timer and builds up the holding voltage via the d.c. voltage converter. The operating coil is energized by the activated voltage source via

the first switching means, while the switching path of the second switching means, which is placed in series with the operating coil, is enabled concurrently. An isolation diode prevents the pickup voltage from reaching the output of the d.c. voltage converter. After a certain time has elapsed, that is, after the pickup time has elapsed, the timer deactivates the voltage source and thereby also the first switching means. Power supply to the operating coil as well as the maintained ON state of the second switching means are then provided by the d.c. voltage converter with the holding voltage supplied via the isolation diode. After the control voltage has been removed, the operating voltage and the holding voltage break down, whereupon the second switching means are turned off, as a result of which the operating coil is de-energized. The time behavior of the timer and the pickup voltage must be selected such that the armature activated by the operating coil is reliably attracted by the magnetic core. During the holding phase, the voltage across the operating coil is significantly lower than during the pickup phase. The holding voltage must be selected, by adjusting the d.c. voltage converter, to a level just sufficient to reliably hold the armature in its attracted position.

Before paragraph [0012], please replace the heading with the following rewritten heading:

BRIEF DESCRIPTION OF THE ~~DRAWING~~ DRAWINGS

Before paragraph [0015], please delete the heading "Best Mode of Implementing the Invention" and insert the new heading --DETAILED DESCRIPTION--.

Please replace paragraph [0022] with the following rewritten paragraph:

[0022] First switching means 16 are formed by a first transistor 62 in source follower configuration with a first protective diode 64 to protect first transistor 62 from negative voltage spikes between the gate and source terminals thereof. The output of first switching means 16, which is connected to first terminal 18 of operating coil 4, is identical to the source terminal of first transistor 62 and, during the pickup phase, supplies ~~holding~~ pickup voltage U_a ~~[sic]~~, which

is reduced by the gate-source voltage of first transistor 62. Due to the potential drop at second junction point 60 toward the end of the pickup phase, first transistor 62 is turned off.